

REMARKS

This amendment should be entered after the final rejection because the claims are amended to place them in better form for appeal and the amendments are non-substantive.

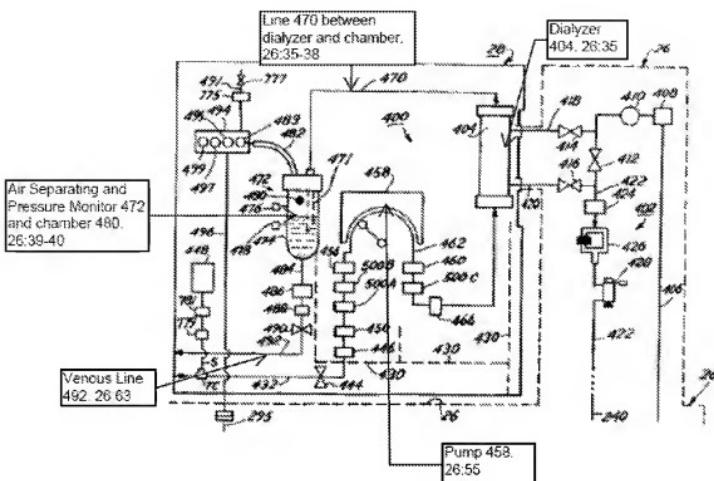
The rejection of claims 82 to 85 as being obvious in view of Kenley is traversed.

The claims require the following elements that are not disclosed in Kenley:

- a) return line directly connected to said at least one patient access that forms a continuous fluid passage substantially free of gases, and
- b) a reverse flow in the return line and the patient access when the pump or pump actuator is reversed.

The rejection states that return line 470 in Kenley is “directly *fluidly* connected” to a patient access. Independent claims 82 and 84 require the return line to be “directly connected” to the patient access. The term “fluidly” is not used in the claims to describe the connection between the return line and the patient access. The return line 470 is directly connected to air-separating and pressure monitoring chamber 472. The return line 470 is not directly connected to a patient access device.

The figure below is an annotated Figure 13 from Kenley et al and shows that the blood line 470 is not connected to a patient access.¹



Kenley teaches away from reversing blood flow in a patient access. Kenley discloses a clamp 490 that prevents reverse flow in return line 492 that leads to a patient access device. When the Kenley pump is reversed, the blood return line 492 is clamped shut to ensure that blood is not drawn out of the patient, into a patient access device and through the return line 492. Kenley, col. 26, lns. 57-60. When the pump is reversed, blood is drawn out of chamber 480 into line 470, air is drawn into chamber 480 and there is no flow through blood line 484, 492 due to the closed clamp 490. Kenley, col. 26, lns. 58-64.

The Office Action misconstrues venous line 492 as having a portion that is upstream of the clamp 490 and as being a patient access device. Return line 492 is

¹ In the following figure, the references to the column and lines of Kenley et al are indicated in the text.

entirely downstream of the clamp 490, where downstream refers to a flow direction from the air separator and pressure monitor 472 to the patient. Kenley, col. 26, lns. 35-37 (“The bottom of the chamber 474 is connected to a line 484 having an ultrasonic air bubble detector 486, a blood sensor 488 and a clamp 490 and is connected to the venous line 492 which leads to the patient.”). Further, venous line 492 leads to a patient access device that is not shown in Figure 13.

The claims require “a continuous fluid passage substantially free of gases.” The fluid passage disclosed in Kenley includes an air-separating and pressure monitoring chamber 472 that is partially filled with air. Kenley, col. 26, lns. 39-64. Air in the blood bubbles to the top of the chamber and is vented. Blood settles in the chamber and ultimately drains out of the chamber bottom and into return line 492. The chamber receives blood fluid entering through line 470 and has an upper outlet for air (which is a fluid) and a lower outlet for blood (which is also a fluid). The air region of the chamber is included in the fluid passage and is a gas portion of the fluid passage. Because of the air region and vent, the chamber 472 in Kenley is not a “continuous fluid passage substantially free of gases.”

It would not have been obvious to modify Kenley to form the claimed invention. Kenley teaches away from a gas free fluid passage and from reversing blood flow in a return patient access device. There is no suggestion or motivation evident from Kenley to

make the modifications needed to form the claimed invention. Accordingly, claims 82 and 84, claims 82 to 85 are not rendered obvious by Kenley.

All claims are in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone applicants' attorney. Prompt reconsideration and allowance of this application is requested.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

NIXON & VANDERIYE P.C.

By: /Jeffry H. Nelson/

Jeffry H. Nelson
Reg. No. 30,481

JHN:glf
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100